

Faces & Places

INDUSTRY

CERN supports new centre for business incubation in the UK

To bridge the gap between basic science and industry, CERN and the Science and Technology Facilities Council (STFC) have launched a new business-incubation centre in the UK. The centre will support businesses and entrepreneurs to take innovative technologies related to high-energy physics from technical concept to market reality.

The centre, at STFC's Daresbury Science and Innovation Campus, follows the success of a business-incubation centre at the STFC's Harwell campus, which has run for 10 years with the support of the European Space Agency (ESA). The ESA Business Incubation Centre (ESA BIC) supports entrepreneurs and hi-tech start-up companies to translate space technologies, applications and services into viable non-space-related business ideas.

The CERN-STFC BIC will nurture innovative ideas based on technologies developed at CERN, with a direct contribution from CERN in terms of expertise. The centre is managed by STFC Innovations Limited, the technology-transfer office of STFC, which will provide successful applicants with entrepreneurial support, including a dedicated business champion to help with business planning, accompanied technical visits to CERN as well as access to scientific, technical and



John Womersley, CEO of STFC, left, and Steve Myers, CERN's director of accelerators and technology, at the launch of the CERN-STFC Business Incubation Centre on the Daresbury Science and Innovation Campus. (Image credit: STFC.)

business expertise from STFC and CERN. The selected projects will also receive a

total funding of up to £40,000 per company, provided by STFC.



On 27–28 March some 30 French companies presented their latest technological advances during the industrial exhibition "France at CERN", which featured products and technologies related to activities at CERN. Here, Nicolas Niemichinow, permanent representative of France to the United Nations Office and other international organizations in Geneva, tours the exhibition with, to the right, Rolf Heuer, director-general of CERN, Frédéric Bordry, head of the technology department at CERN, and Fabrice Lelouvier, director of the Swiss branch of UBIFRANCE, the French Agency for International Business Development, responsible for promoting French technologies and know-how abroad. The event was sponsored by the French subsidiary of RS Components.

AWARDS

Trần Thanh Vân receives the AIP's Tate Medal

The American Institute of Physics (AIP) has given its 2011 John Torrence Tate Award for International Leadership in Physics to Jean Trần Thanh Vân. He receives the award “in recognition of his role spanning more than four decades in bringing together the community of physicists across national and cultural borders through the Rencontres de Moriond and Rencontres de Blois, and for his tireless efforts to build a modern scientific community in Vietnam”.

Trần Thanh Vân was born in Dong Hoi, Vietnam, and spent his childhood in a country ravaged by war. At the age of 13 he left his family to study in Huế and at the age of 17 took an opportunity to go to university in France, ultimately gaining a doctorate in particle physics from the University of Paris in 1963. While working on his thesis, he perceived a lack of communication between theoreticians and experimentalists in the same field so, in 1966, he created with a few colleagues a series of meetings – “Rencontres” – to promote exchange and collaboration in a



Jean Trần Thanh Vân, left, with François Englert, at the 2012 Rencontres de Moriond, earlier this year. (Image credit: J-M Frère.)

friendly and convivial atmosphere.

The Rencontres de Moriond meetings went on to gain international stature as a venue for presenting new discoveries (*CERN Courier* July/August 2005 p21). Held in winter in the French Alps, the meetings provide plenty of time for discussion, including breaks to share physical exercise in beautiful surroundings. Another important feature is the prominence given to young scientists,

with results presented directly by those responsible for the analysis. Many prominent physicists have given their first international presentation at these Rencontres. In addition, Trần Thanh Vân has at all times promoted broad international collaboration; even in the most difficult times of the Cold War, he ensured that scientists from all countries, including the USSR and the Eastern block, could participate.

In 1981, Trần Thanh Vân started the Moriond Astrophysics series, which is held in parallel with the particle-physics Rencontres to maximize interactions between the two disciplines. In this spirit of cross-fertilization, a new series, the Rencontres de Blois, was initiated in 1989, with the rich architecture of the Loire valley providing a cultural backdrop. In 1993, with the opening of Vietnam to the western world, the first Rencontres du Vietnam were held to enable the Vietnamese scientific community – after years of isolation – to develop contacts and exchanges with foreign colleagues.

Alain Aspect receives Albert Einstein Medal

In a ceremony on 10 May, Alain Aspect received the Albert Einstein Medal 2012, awarded by the Albert Einstein Society, Bern. The medal, which is to honour extraordinary achievements related to Einstein's legacy, is awarded to Aspect for his fundamental contributions to quantum



Alain Aspect holds up his award. (Image credit: H Friedli / Albert Einstein Society.)

physics, in particular for his experimental tests of Bell's inequalities. Aspect is

research director at the Centre National de la Recherche Scientifique (CNRS) as well as a professor at the Optics Institute Graduate School and at École Polytechnique, Paris. He leads the Atomic Optics Group at the Charles Fabry Laboratory in Palaiseau (Optics Institute Graduate School/CNRS/Université Paris-Sud).

The Albert Einstein Society was founded in Bern in 1977 and the first medal was awarded to Stephen Hawking in 1979, the centenary of Einstein's birth. The society also maintains Einstein's former flat, at 49 Kramgasse in Bern, as a commemoration site open to the public.

London's Royal Society elects new fellows

Tejinder (Jim) Virdee has been elected as a fellow of the Royal Society in London. Virdee, who is professor at Imperial College London, is distinguished primarily for the design, construction and exploitation of the CMS experiment at the LHC. He originated the concept of CMS with four colleagues around the year 1990 and went on to be spokesperson for the collaboration



Jim Virdee, now FRS. (Image credit: STFC.)

from 2007 until 2009, during the final commissioning and first stage of data-taking.

Other new fellows announced on 19 April include Christopher Hull, who is also a professor at Imperial College. He has been elected for his imaginative and influential contributions to quantum gravity, specifically superstring and supergravity theories. In addition, cosmologist Brian Schmidt, of the Australian National University, becomes the 83rd Nobel Laureate to join the ranks of the society's fellows and foreign members. As leader of the High-z Supernova Search, he shared the 2011 Nobel Prize in Physics for the discovery of the accelerating expansion of the universe.

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CORNELL

Maury Tigner takes a back seat

Maury Tigner has retired as Head of the Cornell Laboratory for Accelerator-based ScienceS and Education (CLASSE) as of December 2011.

Maury's work and contributions to accelerator physics and engineering have spanned five decades, having begun in 1959 with the nearly single-handed design and construction of a 240 MeV electron storage-ring for his doctoral thesis at Cornell under Robert Wilson. His career has since covered critical developments at Cornell, the beginnings of the HERA electron-proton collider at DESY, the core of the design effort for the Superconducting Super Collider and vital help for Chinese high-energy physics – all while being a prime mover of fundamental developments in superconducting RF technology. He also served as chair of the Machine Advisory Committee for the LHC at CERN and is co-editor of the widely used *Handbook of Accelerator Physics and Engineering*.

Throughout his career, Maury's drive and vision have influenced the direction of accelerator development and inspired students and colleagues. An early example is the seminal paper he published in 1965 in *Nuovo Cimento* in which he envisioned colliding linac beams as an alternative to storage rings for studying electron-electron collisions. Here he already invoked the benefits of superconductivity and lowering the operating power by using energy recovery.

Soon after the discovery of J/ψ, the Cornell laboratory proposed to the National Science Foundation the conversion of its synchrotron facility into an electron-positron collider with 8 GeV beams. After approval in late 1977, Maury was put in charge of construction of the Cornell Electron Storage Ring (CESR). Electrons were stored on 2 April 1979, followed by positrons on 28 May and the CLEO and CUSB experiments started data-taking in October the same year. The fortunate timing of the discovery at Fermilab of the Y states in the "sweet spot" of CESR's energy range provided the fuel for several decades of highly productive B physics. CESR's colliding-beam operation for the CLEO collaboration ended in March 2008 and the Cornell High Energy Synchrotron Source (CHESS) moved from mainly parasitic operation to become a prime user of CESR. At the same time, the CESR Test Accelerator (CesrTA) programme was formed to explore



Maury Tigner and colleagues in the early days of CESR at Cornell. His drive and vision have influenced the direction of accelerator development throughout the world. (Image credit: Cornell.)

beam-dynamics effects related to the design options for damping rings for a future International Linear Collider and it shared, with CHESS, the operation of CESR.

Under Maury's leadership Cornell tested the first superconducting cavities in a storage ring. The Cornell cavity design was adopted for the recirculating linac in the Continuous Electron Beam Accelerator Facility, at Jefferson Lab. This facility currently runs 350 such cavities at an average gradient close to 7 MV/m to provide beams at 6.5 GeV. Throughout the decade up to his retirement, Maury devoted much of his time to laying the groundwork for a proposal for a full energy-recovery linac operating at 100 mA beam current and 5 GeV beam energy. Such a machine will be a monument to his long career, combining his 1965 concept for colliding linac beams with the superconducting RF that has been his passion, and turning his vision into a laboratory at the forefront of science.

Maury has received many awards, including, fittingly, the Robert R Wilson Prize of the American Physical Society, which cited Maury's "notable contributions to the accelerator field as an inventor, designer, builder and leader, including early pioneering developments in superconducting radio-frequency systems," as well as his leadership in the construction of CESR.

MEETINGS

The **8th Patras Workshop on Axions, WIMPs and WISPs** will be held on 18–22 July at the Hyatt Regency in Chicago. This is the first time that this workshop series is visiting the US and it continues the tradition of attracting young scientists together with experimental and theoretical leaders in the field. The format includes plenary sessions only, allowing ample time for discussion. This year, participants will be able to spend one day at nearby Fermilab. For further information, see <http://axion-wimp.desy.de>.

QCD 12, the 16th Montpellier International Conference on Quantum Chromodynamics, will take place on 2–7 July in Montpellier. The meeting, which traditionally involves equal mixtures of experimentalists and theorists, and of young and senior physicists, will cover different aspects of QCD – perturbative, non-perturbative and the interface with other fields. For further information, see www.lpta.univ-montp2.fr/users/qcd/qcd2012/qcd12/Welcome.html.

NEW PRODUCTS

Murata Power Solutions has announced the UWQ series of isolated open-frame 204 W DC/DC converters packaged in a through-hole-mount quarter-brick format. Just 58.4 × 36.8 × 11.7 mm in size and with an efficiency of 92%, the UWQ series has a 4:1 input voltage range of 18–75 VDC around a nominal 48 VDC input. It provides a single output voltage of 12 VDC up to 17 A of current with a line regulation of +/-1% and load regulation of +/-1.5. For further information, contact Sarah Smith, tel +44 1908 615 232, e-mail sarah.smith@murata-ps.com or visit www.murata-ps.com.

Pfeiffer Vacuum has introduced the Adixen ASI 30 fully integratable modular helium-leak detector. The ASI 30 features 3G technology and reduced maintenance requirements. Its small, modular design is optimized for minimum space. The interface options include RS232, Ethernet, Profibus or USB. Pfeiffer has also announced two new gas-analysis systems, the Sputter Process Monitor SPM 220 and the High Pressure Analyzer HPA 220. Both systems are based on the mass spectrometer PrismaPlus in combination with a dry compressing HiPace turbo pumping station and both are available in mass ranges of 1–100 and 1–200 amu; the HPA 200 is also available for 1–300 amu. For details, visit www.pfeiffer-vacuum.com.

JINR

Kadyshevsky celebrates 75 years

Vladimir Kadyshevsky, scientific leader at the Joint Institute for Nuclear Research (JINR) celebrated his 75th birthday on 5 May.

Kadyshevsky has been with JINR since 1962, when he joined the Laboratory of Theoretical Physics after graduating from the Lomonosov State University in Moscow in 1960. He was elected director of the Laboratory of Theoretical Physics of JINR in 1987 and was director of JINR in the years 1992–2005. Since 2006 he has served as scientific leader, contributing a great deal to the development of the main research trends of JINR as an international intergovernmental scientific organization – and consolidating its reputation in the world.

In theoretical physics, Kadyshevsky's name is associated with the covariant Hamiltonian representation of quantum field theory on which he started work in the early 1960s. This led to a 3D integral equation for



Vladimir Kadyshevsky, scientific leader. (Image credit: JINR.)

the relativistic scattering amplitude, which is now known as the Kadyshevsky equation, and to new methods for solving finite

difference equations. His studies in this field, acknowledged by other scientists, anticipated the research on non-commutative geometry of the 1990s.

In 1977–1978, Kadyshevsky was head of the group of Soviet physicists who worked at Fermilab and in the years 1983–1985 he led research on DELPHI at CERN as part of JINR's contribution to the experiments at the Large Electron–Positron collider.

Kadyshevsky successfully combines his various scientific and science-organizational activities with training young scientists.

For many years he has been a lecturer in theoretical physics at the Lomonosov State University in Moscow and is currently head of elementary particle physics. He was one of the initiators of the university in Dubna that was opened in 1994 with the name of “The International University of Nature, Society and Man”, and he was its president from 1995 until 2009.



PUBLICATIONS

The latest vehicle for accelerating news

A new online publication – *Accelerating News* – is now available for the particle-accelerator community. Sponsored by four accelerator projects, it showcases project news and results, as well as events and articles of interest to those working in the accelerator field. The site's sponsors – EuCARD, TIARA, HiLumi LHC and EUROnu – are all projects co-funded by the European Commission under the 7th Framework Programme.

Issue 1, out now, highlights how the EuCARD accelerator R&D project is promoting not only its endeavours, but also the applications of accelerators in nuclear power and in medical-isotope production. The issue also outlines the EUROnu design study of future high-intensity neutrino-oscillation facilities, explains the latest

VISITS



Håkan Ekengren, Swedish state secretary to the minister for enterprise, left, was welcomed to CERN on 6 March by **Sergio Bertolucci**, CERN's director for research and scientific computing. The visit included tours of the ATLAS Visitor Centre, the ATLAS underground area, the ALICE underground area, the CLIC Study Facility and the Computer Centre.

On 8 March, Czech deputy minister, research and higher education section, ministry of education, youth and sports, **Ivan Wilhelm**, left, and **Katerina Sequensová**, ambassador, permanent representative of the Czech Republic to the United Nations Office and other international organizations in Geneva, visited the CERN Control Centre, where **Giulia Papotti**, right, of the Beams Department explained the operation of the accelerator complex. The deputy minister also toured the ATLAS Visitor Centre.



results from the TIARA project – including a new world record for vertical emittance – and describes developments in the High Luminosity LHC design study (*CERN Courier* March 2012 p19).

The newsletter will be published quarterly – spring, summer, autumn and winter – and Issue 2 is due out soon. To view the current issue and to receive future issues by e-mail, visit www.acceleratingnews.eu.

Faces & Places

OBITUARIES

Patrice Payre 1950–2010

Patrice Payre, experimental physicist, passed away after a heart attack in December 2010.

Patrice was born in Brittany on 19 March 1950. He obtained his PhD at the Institut de Physique Nucléaire, Orsay, on trigger studies of multimMuon production in the muon beam at CERN's Super Proton Synchrotron. This work contributed to the proposal of what would later become the European Muon Collaboration (EMC) experiment. On joining the Centre National de la Recherche Scientifique he continued his work on the EMC experiment at the Laboratoire d'Annecy-le-Vieux de Physique des Particules (LAPP), where he made major contributions to the measurement of the structure-functions of iron and played a leading role in the demonstration of the so-called "EMC effect".

In 1983, Patrice was among the first researchers to join the newly created Centre for Particle Physics of Marseilles (CPPM), where he became involved in the ALEPH collaboration at the Large Electron-Positron (LEP) collider at CERN. He was responsible for the construction and maintenance of the gas recirculation system of the electromagnetic calorimeter. This system was based on what was at the time a new approach, using a network of distributed microprocessor-controlled stations supervised by an innovative artificial intelligence system. For the subsequent Phase 2 of the LEP collider, he made major contributions to the mechanical design and construction of the upgraded ALEPH vertex detector.

In 1995, Patrice went on to contribute



Payre in the lab. (Image credit: CPPM.)

to the pioneering efforts to establish the field of neutrino astronomy, making feasibility studies for the construction of the ANTARES deep-sea neutrino telescope in the Mediterranean Sea, offshore from Toulon. Participating in the site evaluation studies, he also led the development of the first software for the muon track-reconstruction. Patrice was also the driving force behind the design and implementation of the timing system used to synchronize the

large number of clocks distributed within the detector.

More recently, inspired by the interdisciplinary potential of underwater observatories, Patrice fostered the development of innovative technologies to monitor the deep-sea environment. These included real-time sampling of dissolved oxygen and techniques to operate electronics in oil at high pressures.

Patrice's independent spirit and great curiosity often led him to unexplored fields, paving the way for others to follow. His great passion for his work was characterized by his inventive solutions to the technological challenges he faced. His talents in both hardware and software benefitted from his careful approach and meticulous attention to detail.

He was a brilliant researcher who was open minded, discrete and generous with his colleagues. With humour and patience he transmitted his love of experimental physics to many generations of students and young researchers. He was also a man of great generosity in everyday life – a true gentleman. He is sorely missed by family, friends and colleagues.

- A special half-day seminar in memory of Patrice Payre will be held at the CPPM on 15 June, with talks on the experiments he took part in. For further information, see <http://marwww.in2p3.fr/sommaire.php3?lang=fr> or e-mail hommage@cppm.in2p3.fr. Messages and dedications about Patrice are also welcome at hommage@cppm.in2p3.fr.

- *His colleagues and friends.*

Siegfried Wolff 1939–2012

Siegfried Wolff, a well known expert on superconducting magnets, passed away at the age of 73 on 13 March after a long illness.

After obtaining his physics diploma in 1965 Wolff joined the bubble-chamber group at DESY as a technical physicist. He made substantial contributions to the successful operation of liquid-hydrogen and deuterium bubble chambers and in 1969 obtained his PhD at the University of Hamburg with a thesis on the formation and growth of bubbles in such chambers.

In the early 1970s, when the electron-

positron storage ring DORIS was constructed, Wolff moved to magnet design and measurement. He designed the compensation coils for an experiment at DORIS that was equipped with a superconducting solenoid, and the magnetic measurements for the larger storage ring PETRA were carried out under his leadership. When the proton-electron collider HERA was proposed, he joined the task force that was set up by Bjørn Wiik to design and construct the superconducting accelerator magnets of the proton ring.

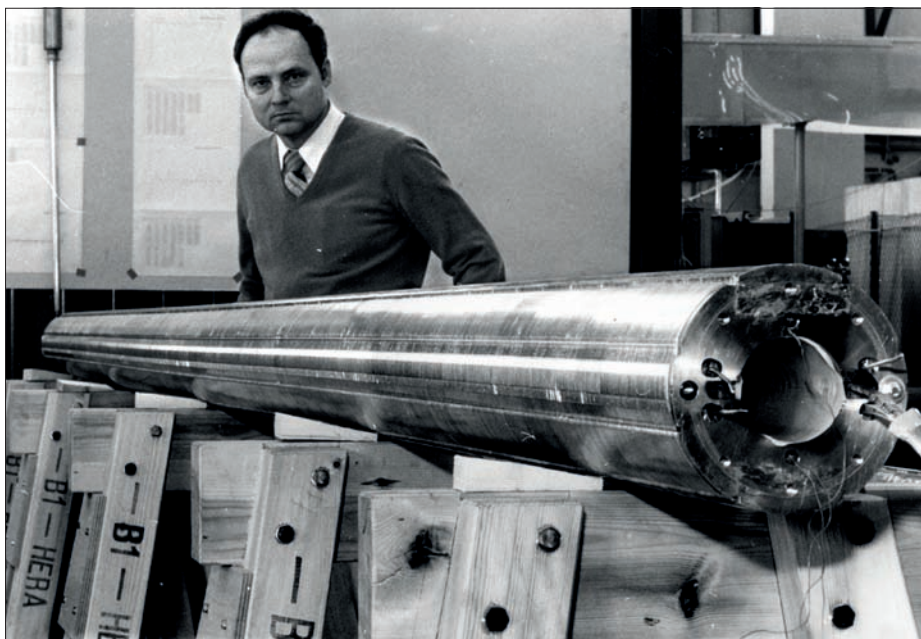
Wolff spent a sabbatical at Fermilab in the period 1979–1980 where he worked in the superconducting-magnet group and acquired a thorough knowledge of the design principles and construction of the superconducting dipoles and quadrupoles for the Tevatron. Once back at DESY, he made important contributions to the design of the HERA dipoles and quadrupoles, and his group of engineers and technicians built a number of prototype dipoles that performed well and exceeded the design field of 5 T.

In 1984 a radical design change was

proposed to increase the field capability of the magnets and improve their quench safety. The warm-iron yoke of the Tevatron-like design was to be replaced by a cold-iron yoke directly surrounding the aluminium-collared coil. Within record time Wolff's group built a short prototype of the new dipole, which reached a field of 6 T without training. The new magnet concept proved extremely successful in the industrially produced HERA magnets and had a strong impact on the design of the LHC magnets. During the construction phase of HERA, Wolff and his group performed the electric and cryogenic installation of the HERA proton ring.

When HERA was completed, Wolff became head of the cryogenics group at DESY. He and his group contributed a great deal to the successful R&D on superconducting cavities with accelerating fields above 25 MV/m, which was carried out by the international TESLA collaboration. Wolff's group was also involved in the cryostat construction and provided the cryogenics for the TESLA Test Facility linac, which was later upgraded to the free-electron laser, FLASH.

Wolff was an internationally recognised expert in superconducting magnets. He was



Siegfried Wolff with a HERA dipole coil in 1983. (Image credit: DESY.)

a member of various advisory committees, among them the LHC Machine Advisory Committee, and he was co-author of a book on superconducting accelerator magnets. He will be remembered by his friends

and colleagues for his great technical competence, his fairness and reliability, and his willingness to accept responsibility for demanding projects.

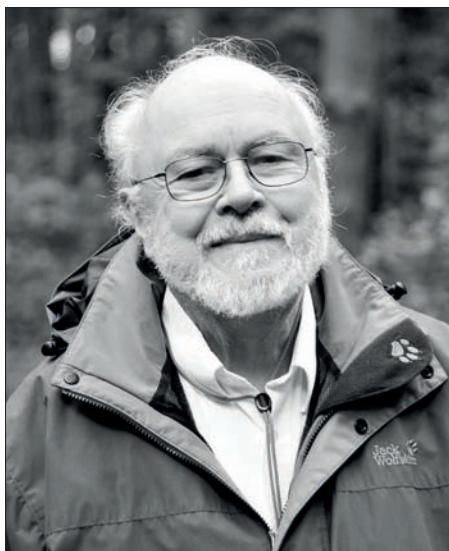
● *Friends and colleagues at DESY.*

Pedro Waloschek 1929–2012

Pedro Waloschek, a senior scientist at DESY and a science writer, passed away on 8 March.

Pedro Waloschek was born in 1929 in Dresden. He had Austrian nationality and was forced to emigrate with his parents to Argentina in 1939 because of persecution by the Nazi regime. He obtained his PhD in 1954 at the University of Buenos Aires and then came back to Europe to work on cosmic radiation and high-energy physics in Goettingen and Bern. From 1957 he worked in Italy, first in Bologna with Gianni Puppi, where he led a bubble chamber group, which made important contributions on parity-violation in strange particles. Subsequently he became professor at the University of Bari.

In 1968 he was appointed senior scientist at DESY and took an active part in the experimental programme for the DORIS electron-positron storage ring. He first gained experience with an experiment at the Frascati storage ring and then became one of the initiators of the PLUTO experiment. He was instrumental in obtaining the first large superconducting solenoid magnet for this type of work in Europe. Among the results



Pedro Waloschek. (Image credit: Nick Wall.)

of the PLUTO experiment, the investigation of the then newly discovered Y resonance is especially noteworthy, leading to an early indication of the existence of the gluon and its spin.

From 1978 Pedro started an additional career as a science writer, communicating the exciting results of high-energy physics to the German-speaking public. For most of the 1980s he was head of the DESY Public Relations group. Apart from articles in newspapers and magazines, he wrote more than 20 books, including *Reise ins Innerste der Materie* (*Journey into innermost matter*, the story of DESY's electron-proton collider HERA, 1991), *Der Multimensch* (on scientific collaborations, unravelling the secrets of quarks and leptons) and a book on the life and work of Rolf Wideröe, published in German and English (*CERN Courier* April 2008 p38). He became DESY's official *CERN Courier* correspondent in 1979, and was one of the longest-serving and most productive informants.

Pedro will be sorely missed by his many friends and admirers in many countries for his enthusiasm and engagement in science and science journalism, and for his positive and friendly personality.

● *Petra Folkerts and Erich Lohrmann, DESY.*

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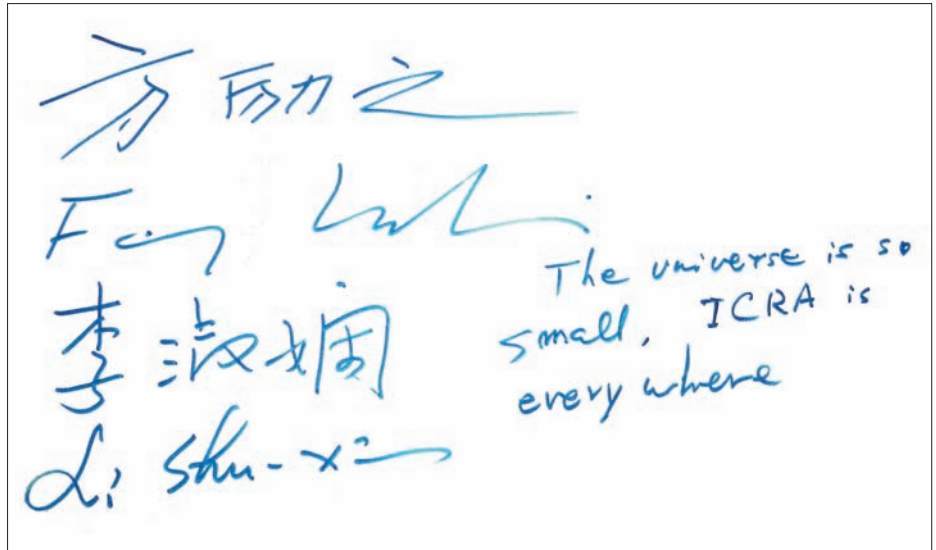
Fang Lizhi 1936–2012

Fang Lizhi (also Li-Zhi), astrophysicist and cosmologist, passed away on 6 April in Tucson, where he had lived for more than 20 years, teaching in the department of physics at the University of Arizona. He introduced relativistic astrophysics and cosmology to China and played an important role in the democracy movement of the 1980s and the development of international relations.

Relativistic astrophysics and cosmology was born in 1967 with observation of the first pulsar, following the discovery of the cosmological background radiation in 1965. It was a by-product of the launch of the space age by John F Kennedy, the development of NASA, and the inspired work of three small groups of highly motivated scientists at Princeton, Cambridge and Moscow. After nine years of collaboration with John A Wheeler in Princeton, one of us (RR) had the good fortune to enter China in 1979 and meet Fang Lizhi and his wife, and scientific collaborator, Li Shu-Xian. Lizhi had already been marked as a dissident at the age of 36, by writing a paper “A cosmological solution in scalar-tensor theory with mass and black body radiation”, which was in stark conflict with the principal dogma purporting an everlasting universe.

A long-lasting friendship developed between Remo and Lizhi. They delivered a joint lecture series in numerous universities of China, many of which bore the scars of the cultural revolution. This resulted in a small red book defining the new field of research, priced at 0.99 yuan, which became as revered among physics students as the other small red book. It is still in print today in China (Taiwan) and it is hoped that in the near future, a new edition will be available in China (Mainland).

In 1983 Lizhi and Remo succeeded in organizing the first international scientific meeting in China: the Third Marcel Grossmann meeting in Shanghai. On this occasion, with help of the president of the China Association of Science and Technology, Zhuo Pei Yuan, they succeeded



The signatures of Fang Lizhi and Li Shu-Xian on the wall of ICRA, University of Rome, photographed in April 2012. (Image credit: ICRA Net Archive.)

in promulgating a paradigm shift in the Chinese way of life: the motto “Friends from all over the world are welcome” became “Scientists from all over the world are welcome”. This allowed, among other things, the participation of Israeli scientists in this scientific celebration of the ideas of Albert Einstein.

After a tumultuous period in the years 1989–1990, Lizhi and Li Shu-Xian settled in Tucson and continued their scientific work, as well as participation in international academic activities. In 2005 Lizhi and Remo co-founded the International Center for Relativistic Astrophysics (ICRANet), an international organization to “promote international scientific co-operation and undertake research in the field of relativistic astrophysics”. The ICRANet Members are today four states – Armenia, Brazil, Italy and the Vatican – as well as the University of Arizona, the University of Stanford and ICRA, at the University Rome.

Lizhi became the president of the steering committee, while Riccardo Giaconci was, and continues to be, the first president of the Scientific Committee. The activities

promoted by ICRANet include the Galileo Xu Guan Qi (GX) meetings, held yearly in China and in the West alternately, with a maximum of 137 participants each from China and from the West. GX1 was held in Shanghai, GX2 in Nice and GX3 in Beijing. Lizhi saw ICRANet connect China and the West in terms of experience and knowledge about the universe, with exchanges among scientists independently of their creed, political and social status.

A few weeks ago, one of us (JR) walked into Lizhi's office and asked when he was moving back to China to pick up where he had left off. This remark had been prompted by a health issue: Lizhi had been suffering from the Arizona Valley fever (*Coccidioidomycosis*) and a move out of the desert is a possible response to the many complications that can follow. Lizhi thought for a long time, and it seemed that the answer was, “I think, tomorrow”, but it was never spoken.

● Johann Rafelski, Department of Physics, University of Arizona, and Remo Ruffini, ICRANet and University of Rome “Sapienza”.



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